

Title (en)

METHOD FOR JOINING TWO COMPONENTS IN THE REGION OF A JOINT ZONE BY MEANS OF AT LEAST ONE LASER BEAM, AND
METHOD FOR GENERATING A CONTINUOUS JOINT SEAM

Title (de)

VERFAHREN ZUM FÜGEN VON ZWEI BAUTEILEN IM BEREICH EINER FÜGEZONE MITTELS MINDESTENS EINEM LASERSTRAHL SOWIE
VERFAHREN ZUM ERZEUGEN EINER DURCHGEHENDEN FÜGENAHT

Title (fr)

PROCÉDÉ D'ASSEMBLAGE DE DEUX ÉLÉMENTS STRUCTURAUX DANS LA RÉGION D'UNE ZONE D'ASSEMBLAGE AU MOYEN D'AU
MOINS UN FAISCEAU LASER ET PROCÉDÉ DE PRODUCTION D'UN JOINT D'ASSEMBLAGE CONTINU

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Application

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Abstract (en)

[origin: WO2017076494A1] The invention relates to a method for joining two components (1, 2), a first component (1) and a second component (2), in the region of a joint zone by means of at least one laser beam. In a first phase, the first component (1) is melted, and a melt lens is formed in the first component (1) from the molten material (9). In a second phase, at least one pressure pulse is applied to the melt in the direction of the second component (2) until the melt lens is deflected into the joint gap as a result of the pressure pulse, bridges the joint gap, and comes into contact with the second component (2), and energy is transmitted to the second component (2) as a result of the melt lens coming into contact with the second component. A temperature curve results in the second component (2) as a result of the energy transmission such that the melting temperature is reached on the upper face of the second component (2), and a melt film is formed. The heat penetration depth is set such that a damaging temperature which damages the second component (2) is not exceeded at a specified depth. The invention further relates to a method for generating a continuous joint seam.

IPC 8 full level

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